

## *Strategic Goal: Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response*

America's wastes will be stored, treated, and disposed of in ways that prevent harm to people and to the natural environment. EPA will work to clean up previously polluted sites, restoring them to uses appropriate for surrounding communities, and respond to and prevent waste-related or industrial accidents.

### BACKGROUND AND CONTEXT

Improper waste management and disposal threatens the health of people, endangers wildlife, and harms vegetation and natural resources. Uncontrolled hazardous and toxic substances, including radioactive waste, often migrate to ground water, surface water, and air.

Consequently, they affect streams, lakes, rivers, and water supplies. Toxins bioaccumulate in fish or accumulate in sediments. In 2000, EPA will promote safe waste storage, treatment, and disposal, clean up active and inactive waste disposal sites, and prevent the creation of new waste sites.

### MEANS AND STRATEGY

A principal objective of this goal is to reduce or control the risks posed to human health and the environment through better waste management and restoration of abandoned waste sites. In partnership with states, tribal governments, the public, and other stakeholders, EPA will reduce or control the risks to human health and the environment at thousands of Superfund, Brownfield, Resource Conservation and Recovery Act (RCRA), and Underground Storage Tank (UST) sites. To achieve this goal, EPA strives to apply the fastest, most effective waste management and cleanup methods available, while involving affected communities in the decision making process. Effective use of research and enforcement strategies will also allow the Agency to further reduce the risks from exposures to hazardous waste.

Another principal objective of this goal is to prevent, reduce, prepare for, and respond to

releases, spills, accidents or emergencies. Through the UST, RCRA, Chemical Preparedness and Prevention, and Oil programs, the Agency and its partners manage the practices of thousands of facilities to prevent dangerous releases to the environment. When releases do occur, EPA and its partners will have the capabilities to successfully respond.

#### Research

Research efforts will continue to focus on ground water and soils research, which seeks to understand the process that governs contaminant transport and fate to improve remediation and monitoring technologies, especially their cost-effectiveness.

The principle areas of concentration are exposure to soil and ground water contaminants, assessment of the risks posed by these

contaminants, cost-effective management of these risks, and the development of innovative technologies to characterize and remediate contaminated sites. Work will also continue under active waste management and combustion facilities. Through the development of new and improved methods and models to assess

exposure and effects, this research will provide the fundamental science and modeling backbone needed to conduct truly multimedia, multipathway exposure modeling and risk assessment.

## EXTERNAL FACTORS

There are a number of external factors that could substantially impact the Agency's ability to achieve the outlined objectives under this goal. The external factors include, for example, heavy reliance on state partnerships, development of new environmental technology, commitment by other federal agencies, or statutory barriers.

The Agency's ability to achieve its goal of reducing the number of confirmed releases from underground storage tanks (USTs) is dependent on the performance of state programs. EPA does not fully fund state UST programs, so achievement of the annual and strategic goals is dependent on the strength of state programs and state funding levels. In most cases, states have the primary responsibility for confirming releases from USTs and for ensuring that facilities meet the minimum technical requirements to prevent releases, except in Indian Country.

The Agency's ability to achieve its goals of reducing risks posed by Superfund sites and ensuring trust fund stewardship are partially dependent upon the capacity of our partners. The Agency's goals of construction completions, cost recovery, and maximizing PRP participation are heavily dependent on the progress of PRP negotiations, agreements with states and tribes, and the nature of contamination

at NPL sites. In addressing Federal facilities, internal decision processes within other Federal agencies such as the Department of Defense and the Department of Energy would impact our goal of establishing Restoration Advisory Boards (RABs)/Site Specific Advisory Boards (SSABs) and other clean up activities.

The Agency's ability to achieve its goal of reducing community risks from chemical accidents is dependent on a number of factors, including: 1) Delegating the response RMP review program to more states in 2000 will depend upon those states enacting laws, allocating funds and developing specific capabilities that will enable them to review and audit risk management plans; and 2) Industry's willingness to provide the strong top-down leadership to make RMP compliance a priority and commit the resources necessary to get the job done.

The Agency's ability to achieve its RCRA goals to prevent releases by proper facility management is dependent on whether states, the primary implementors, have received authorization of their hazardous waste management or approval of municipal solid waste landfill permit programs. As such, EPA's annual performance depends, in part, on its state partners' commitment to this goal.

## *Resource Summary*

(Dollars in Thousands)

	<b>FY 1999 Enacted</b>	<b>FY 2000 Request</b>	<b>FY 2000 Req. v. FY 1999 Enacted.</b>
<b>Better Waste Management, Restoration of Contaminated Waste Sites, and Emergency Response</b>	<b>\$1,655,913.5</b>	<b>\$1,656,719.5</b>	<b>\$806.0</b>
Reduce or Control Risks to Human Health	\$1,491,141.1	\$1,477,134.1	(\$14,007.0)
Environmental Program & Management	\$42,301.1	\$42,174.8	(\$126.3)
Science & Technology	\$49,809.4	\$8,375.2	(\$41,434.2)
State and Tribal Assistance Grants	\$24,808.8	\$24,808.8	\$0.0
Leaking Underground Storage Tanks	\$70,418.7	\$69,500.7	(\$918.0)
Oil Spill Response	\$962.0	\$962.0	\$0.0
Hazardous Substance Superfund	\$1,302,841.1	\$1,331,312.6	\$28,471.5
Prevent , Reduce and Respond to Releases, Spills, Accidents or Emergencies	\$164,772.4	\$179,585.4	\$14,813.0
Environmental Program & Management	\$93,966.8	\$106,110.4	\$12,143.6
Science & Technology	\$8,797.6	\$9,449.0	\$651.4
Oil Spill Response	\$13,496.9	\$14,114.9	\$618.0
Hazardous Substance Superfund	\$10,472.7	\$10,472.7	\$0.0
Total Workyears:	4,316.9	4,246.1	-70.8

## Strategic Objective: Reduce or Control Risks to Human Health

By 2005, EPA and its partners will reduce or control the risk to human health and the environment at over 375,000 contaminated Superfund, RCRA, UST and brownfield sites.

### *Key Programs*

(Dollars in Thousands)

	<b>FY 1999 Enacted</b>	<b>FY 2000 Request</b>
RCRA Corrective Action	\$18,167.4	\$22,755.5
RCRA State Grants	\$24,808.8	\$24,808.8
Federal Preparedness	\$1,500.0	\$1,500.0
Leaking Underground Storage Tanks (LUST) Cooperative Agreements	\$58,990.0	\$57,750.0
Superfund Remedial Actions	\$588,190.0	\$592,842.5
Superfund Removal Actions	\$199,419.1	\$207,399.9
Federal Facilities	\$28,641.6	\$28,720.4
Assessments	\$87,738.8	\$88,970.3
Brownfields	\$91,538.9	\$91,667.5
ATSDR Superfund Support	\$76,000.0	\$64,000.0
NIEHS Superfund Support	\$60,000.0	\$48,526.7
Other Federal Agency Superfund Support	\$10,000.0	\$11,035.0
Hazardous Substance Research: Hazardous Substance Research Centers	\$1,067.2	\$1,092.5
Hazardous Substance Research: Superfund Innovative Technology Evaluation (SITE)	\$7,663.1	\$7,114.6
EMPACT	\$398.4	\$440.2
Common Sense Initiative	\$135.6	\$0.0
Superfund - Maximize PRP Involvement (including reforms)	\$89,109.2	\$89,234.5
Superfund - Cost Recovery	\$30,494.1	\$30,494.1
Superfund - Justice Support	\$29,000.0	\$28,663.5

## *Annual Performance Goals and Performance Measures*

### **LEAKING UNDERGROUND STORAGE TANK CLEANUPS**

In 2000      Complete 21,000 Leaking Underground Storage Tank (LUST) Cleanups for a cumulative total of 246,000 cleanups since 1987.

In 1999      Complete 22,000 Leaking Underground Storage Tank (LUST) cleanups.

<b>Performance Measures</b>	<b>FY 1999</b>	<b>FY 2000</b>
LUST cleanups completed.	22,000 cleanups	21,000 cleanups
<b>Baseline:</b>	EPA completed a total of 178,297 LUST cleanups through 1997.	

### **SUPERFUND CLEANUPS**

In 2000      EPA will complete 85 Superfund cleanups (construction completions), continuing on a path to reach 925 completed cleanups by the end of 2002.

In 1999      EPA and its partners will maintain the pace of cleanups by completing construction at 85 additional Superfund sites (for a cumulative total of 670 construction completions with a target of 925 construction completions in 2002).

<b>Performance Measures</b>	<b>FY 1999</b>	<b>FY 2000</b>
Construction completions.	85 completions	85 completions
<b>Baseline:</b>	EPA completed a total of 585 construction completions from 1982 through 1998.	

### **SUPERFUND COST RECOVERY**

In 2000      Ensure trust fund stewardship by recovering costs from PRPs when EPA expends trust fund monies. Address cost recovery at all NPL and non-NPL sites w/ a statute of limitations on total past costs equal to or greater than \$200,000.

In 1999      Address cost recovery at all National Priority List (NPL) and non-NPL sites with a statute of limitations on total past costs equal to or greater than \$200,000.

<b>Performance Measures</b>	<b>FY 1999</b>	<b>FY 2000</b>
Address Cost Recovery at all NPL & Non-NPL sites w/tot. past costs or > \$200K	100 Percent	100 Percent

**Baseline:** In FY98 the Agency will have addressed 100% of Cost Recovery at all NPL & Non-NPL sites with total past costs equal or greater than \$200,000.

### **SUPERFUND POTENTIALLY RESPONSIBLE PARTY PARTICIPATION**

In 2000 Maximize all aspects of PRP partic., including 70% of the work conducted on new construction starts at non-Fed Fac sites on the NPL, and emphasize fairness in the settlement process. Result is timely and protective clean up of the Nation's worst contam. sites and other sign. threats to pub. health

In 1999 Obtain PRP commitments for 70% of the work conducted at new construction starts at non-Federal facility sites on the NPL and emphasize fairness in the settlement process.

<b>Performance Measures:</b>	<b>FY 1999</b>	<b>FY 2000</b>
Section 106 Civil Actions	38 Agreements	
Orphan Share Offers at all eligible work settlement negotiations much obliged	100% Settlements	30 Settlements
De Minimis Settlements	23 Settlements	20 Settlements
Remedial Admin. Orders	19 Orders	
Administrative and judicial actions		100 actions

**Baseline:** In FY97 approximately 70% of new remedial work at NPL sites (excluding Federal facilities) was initiated by private parties.

### **RCRA CORRECTIVE ACTION**

In 2000 170 (for a cumulative total of 408 or 24%) of high priority RCRA facilities will have human exposures controlled and 170 (for a cumulative total of 289 or 17%) of high priority RCRA facilities will have groundwater releases controlled.

In 1999 83 (for a cumulative total of 238 or 14%) of high priority RCRA facilities will have human exposures controlled and 45 (for a cumulative total of 119 or 7%) will have groundwater releases controlled.

<b>Performance Measures:</b>	<b>FY 1999</b>	<b>FY 2000</b>
High priority RCRA facilities with human exposures to toxins controlled.	83 facilities	170 facilities

High priority RCRA facilities with toxic releases to groundwater controlled.	45 facilities	170 facilities
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**Baseline:** EPA established a baseline of 1,700 high priority corrective action facilities in January 1999.

### **SUPERFUND FEDERAL FACILITIES COMPLIANCE**

In 2000      Ensure compliance with Federal facility statutes and CERCLA Agreements and ensure completion of current NPL CERCLA IAGs.

<b>Performance Measures</b>	<b>FY 1999</b>	<b>FY 2000</b>
Fed. Facilities CERCLA Negotiations		4 Negotiations
Fed. Facilities Current NPL IAGs		6 NPL IAGs

**Baseline:** No Performance Baseline Information is available.

### **BROWNFIELDS SITE ASSESSMENT GRANTS**

In 2000      EPA will fund Brownfields site assessments in 50 more communities, thus reaching 350 communities by the end of 2000.

In 1999      EPA will fund Brownfields site assessments in 100 more communities, thus reaching 300 communities by the end of 1999.

<b>Performance Measures</b>	<b>FY 1999</b>	<b>FY 2000</b>
Cooperative agreements for site assessment.	100 agreements	50 agreements

**Baseline:** EPA signed a cumulative of 227 agreements for site assessments in 1998.

### Research

### **SCIENTIFICALLY DEFENSIBLE DECISIONS FOR SITE CLEANUP**

In 2000      Enhance scientifically-defensible decisions for site cleanup (cu) by providing targeted research & tech. support.

<b>Performance Measures</b>	<b>FY 2000</b>
Final report and draft journal article comparing the most common analytical methods for VOC in soils will allow waste site mgrs. to select the most appr. methods to char. contamination at waste sites.	09/30/2000 report

Technical Resource Document for Monitored Natural Attenuation in Sediments	1 document
Summary Report of Case Studies of Natural Attenuation of MTBE, a fuel additive, at Geographically Diverse Locations	1 report
Progress report on Field Demonstration of Chemically-Enhanced Subsurface Dense, Non-Aqueous Phase Liquid Extraction Technologies	09/30/2000 report
Superfund Innovative Technology Evaluation (SITE) Program Report to Congress.	1 report
A report summarizing the key research findings methods, models, and factors relating to evaluating the risks from the dermal route of exposure.	1 report
Develop eco-toxicity soil screening values for the 20 most common Superfund soil contaminants for plants, invertebrate microbes, birds, and mammals.	09/30/2000 values
<b>Baseline:</b> EPA research will focus on the need to: improve characterization of contamination by VOCs and NAPLs; improve risk assessments for the dermal route of exposure and for ecological receptors; and improve and evaluate, including via SITE demonstrations, cleanup and natural attenuation processes. In addition, the SITE report to Congress will document the completion of the required six field evaluation projects and the maintenance of a 60 percent or greater technology deployment rate.	

## VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

The Office of Underground Storage Tanks (OUST) uses the following processes to verify and validate the performance measures data.

Designated State agencies submit semi-annual progress reports to the EPA regional offices, who review, verify and then forward the data to the OUST Headquarters. OUST Headquarters staff examine the data and resolve any discrepancies with the regional offices. The data are displayed on a region by region basis, which allows regional staff to verify their data. OUST does not maintain a national database.

The performance results are also used in OUST's Regional Strategic Overview (RSO) Process to assess the status of State progress in implementing the program. This process is based on strategic discussions that the program has with the states, regarding how to continue to improve states' performance. In the mid-year and end of year state evaluations, the Program discusses with states their efforts to update and validate their data, and to make continual improvements in their performance. EPA relies on its state partners to provide our measurement data which



have been used by the UST/LUST program for 10 years.

CERCLIS is the official database used by the Agency to help track and store Superfund national site information. The Agency is taking steps to ensure that all Superfund accountability data are rigorously validated. The database is used to track, store, and report national accomplishment information. It has defined the various roles and responsibilities of key individuals who are responsible for development, operation and maintenance of CERCLIS.

The headquarters sponsor of the data is responsible for (1) identifying the data elements needed, (2) defining the data elements, and (3) informing the appropriate people that the information needs to be collected and loaded into CERCLIS. The regional person who owns and enters the data (e.g., Superfund remedial project manager) is responsible for reviewing, verifying, and validating site data in CERCLIS. The Information Management Center (IMC), under the EPA's Office of Emergency and Remedial Response (OERR), responsibility is to ensure: (1) there is a data element with an accurate definition for all data; (2) the data element is accessible to searches and can be retrieved for reports; (3) the source for the data is referenced in the system; (4) the data is accurately entered or converted into the system; (5) data from other sources is considered draft until it has been checked against its source data, and is found acceptable; and (6) data integrity is maintained in all system applications and reports.

To assure data accuracy and control, the following administrative controls are in place:

- (1) Superfund/Oil Implementation Manual (SPIM) -- This is the program management manual which details what data must be reported;

- (2) Report Specifications -- Report specifications are published for each report detailing how reported data are calculated;
- (3) Coding Guide -- It contains technical instructions to data users such as *regional IMCs*, program personnel, report owners and data input personnel;
- (4) Quality Assurance (QA) Unit Testing Unit testing is an extensive QA check made by the report programmer to assure that its product is producing accurate data that conforms to the current specification;
- (5) QA Third Party Testing -- Third party testing is an extensive test made by an independent QA tester to assure that the report produces data in conformance with the report specifications;
- (6) Regional CERCLIS Data Entry Internal Control Plan -- The data entry internal control plan includes: (a) regional policies and procedures for entering data into CERCLIS; (b) a review process to ensure that all Superfund accomplishments are supported by source documentation; (c) delegation of authorities for approval of data input into CERCLIS; and (d) procedures to ensure that reported accomplishments meet accomplishment definitions ; and
- (7) historical lockout feature has been added to CERCLIS so that changes in past fiscal year data: (a) can only be changed by approved and designated personnel, and (b) are logged to a change-log report.

Two audits, one by the Office Inspector General (OIG) and the other by Government Accounting Office (GAO), were done to assess the validity of the data in CERCLIS. The OIG audit report Superfund Construction Completion reporting, No. E1SGF7-05-0102- 8100030, was performed to verify the accuracy of the information that the Agency was providing to Congress and the public regarding the construction completion statistic. The OIG concluded that the Agency has good management controls to ensure the accuracy of the information that is reported, and Congress and the public can rely upon the information EPA provides regarding construction completions.

The GAO's report Superfund: Information on the Status of Sites, GAO/RCED-98-241, also sought to review the accuracy of the information in CERCLIS on sites cleanup progress. GAO tested the accuracy of data in the CERCLIS system for a random sample of NPL sites. On the basis of GAO's sample results, GAO estimates that the cleanup status of NPL sites reported by the Superfund database is accurate for 95% of the sites.

In 2000, the Agency will continue its efforts begun in 1999 to improve the Superfund program's technical information by incorporating more site remedy selection, risk, removal response, and community involvement information in CERCLIS. Also, it will continue its efforts to share information among the Federal, state and tribal programs. The additional information will further enhance the Agency's efforts to efficiently identify, evaluate and remediate Superfund hazardous waste sites.

RCRA data verification procedures ensure that the data collected at the field or facility level are not corrupted or confused before they are presented, aggregated, and analyzed at the Federal level. Environmental monitoring data will

meet standard Quality Assurance/Quality Control (QA/QC) procedures for the RCRA program, as documented in the Office of Solid Waste Quality Assurance Management Plan and the Guidebook for QA/QC Procedure for Submission of Data for the LDR Program. These procedures, in part, define requirements for sampling and analysis to assure data quality. Another common method of verification involves examination of data collected and evaluating the relationship of those data to other data collected under similar circumstances.

The Resource Conservation Recovery Information System (RCRIS) is the national database which supports EPA's RCRA program. RCRIS contains information on entities (generically referred to as handlers) engaged in hazardous waste generation and management activities regulated under the portion of RCRA that provides for regulation of hazardous waste. RCRIS has several different modules, including a Corrective Action Module which tracks the status of facilities requiring correction action and also the two environmental indicators related to corrective action. In 1999, the Agency will have finalized its baseline and development of its national guidance for evaluating and documenting environmental indicators. The Corrective Action Program is also considering Headquarters include spot checks of Regional and State determinations during the annual Beginning of the Year process.

While some problems in the accuracy of RCRIS data have been found in the past, significant improvements in quality have been made over the last two years. The importance of RCRIS data has been recognized, and the quality of RCRIS data has improved, due to the Headquarters office pulling and using the RCRIS data in reports that are issued to the Regions and states. Charts illustrating the comparative progress between Regions, and between states

within each Region, have been constructed and shared with the Regions and states. These charts will be placed on a web site, that will be available to the public, in the near future.

RCRIS controls include maintaining a high degree of consistency in data elements over time as well as data screen edits to help ensure that key data is entered for all facilities. States and Regions, who create the databases, manage data quality control. RCRIS has a suite of user and system documentation which describes the overall administration of the data collection and management activities. Training on use of the systems is provided on a regular basis, usually annually depending on the nature of system changes and user needs.

The RCRA program is currently evaluating its future information management needs and systems through a joint initiative with the states called WIN/Informed. This project covers the activities and information currently supported by both the RCRIS and BRS data systems. Analysis under WIN/Informed includes the identification of the data elements needed to support the implementation and management of the RCRA program; development of common, agreed upon national definitions; identification of programmatic process improvements; and tracking burden reduction. The design and construction of new systems will be based on the results of each area of analysis, and will be flexible to accommodate future needs. The WIN/Informed project is scheduled to be completed by the end of the calendar year 2002.

In order to validate the Brownfields performance measure data, the Outreach and Special Projects Staff utilize data input and verification of the Brownfields Management System (BMS) and the CERCLIS 3 system. The BMS is used to evaluate management, environmental, and economically-related results

such as jobs generated and acres assessed and cleaned up. BMS uses data gathered from Brownfield pilots' quarterly reports and from the Regions. The CERCLIS 3 system records Regional accomplishments on Brownfields Assessments. Verification relies on reviews by Regional staff responsible for pilot cooperative agreements or Brownfields cooperative agreements and contracts.

### Research

EPA has several strategies to validate and verify performance measures in the area of environmental science and technology research. Because the major output of research is technical information, primarily in the form of reports, software, protocols, etc., key to these strategies is the performance of both peer reviews and quality reviews to ensure that requirements are met.

Peer reviews provide assurance during the pre-planning, planning, and reporting of environmental science and research activities that the work meets peer expectations. Only those science activities that pass agency peer review are addressed. This applies to program-level, project-level, and research outputs. The quality of the peer review activity is monitored by EPA to ensure that peer reviews are performed consistently, according to Agency policy, and that any identified areas of concern are resolved through discussion or the implementation of corrective action.

The Agency's expanded focus on peer review helps ensure that the performance measures listed here are verified and validated by an external organization. This is accomplished through the use of the Science Advisory Board (SAB) and the Board of Scientific Counselors (BOSC). The BOSC, established under the Federal Advisory Committee Act, provides an added measure of assurance by examining the

way the Agency uses peer review, as well as the management of its research and development laboratories.

In 1998, the Agency presented a new Agency-wide quality system in Agency Order 5360.1/chg 1. This system provided policy to ensure that all environmental programs performed by or for the Agency be supported by individual quality systems that comply fully with the American National Standard, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (ANSI/ASQC E4-1994).

The order expanded the applicability of quality assurance and quality control to the design, construction, and operation by EPA organizations of environmental technology such as pollution control and abatement systems; treatment, storage, and disposal systems; and remediation systems. This rededication to quality provides the needed management and technical practices to assure that environmental data developed in research and used to support Agency decisions are of adequate quality and usability for their intended purpose.

A quality assurance system is implemented at all levels in the EPA research organization. The Agency-wide quality assurance system is a management system that provides the necessary elements to plan, implement, document, and assess the effectiveness of quality assurance and quality control activities applied to environmental programs conducted by or for EPA. This quality management system provides for identification of environmental programs for which QA/QC is needed, specification of the quality of the data required from environmental programs, and provision of sufficient resources to assure that an adequate level of QA/QC is performed.

Agency measurements are based on the application of standard EPA and ASTM methodology as well as performance-based measurement systems. Non-standard methods are validated at the project level. Internal and external management system assessments report the efficacy of the management system for quality of the data and the final research results. The quality assurance annual report and work plan submitted by each organizational unit provides an accountable mechanism for quality activities. Continuous improvement in the quality system is accomplished through discussion and review of assessment results.

## STATUTORY AUTHORITIES

Solid Waste Disposal Act as amended by Hazardous and Solid Waste Amendments of 1984 to the Resource Conservation and Recovery Act of 1976

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986

Pollution Prevention Act (PPA) (42 U.S.C. 13101-13109)

Oil Pollution Act 33 U.S.C.A.

Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act (Public Law 102-579 as amended by Public Law 104-201) 40 CFR 194: Criteria for the Certification and Recertification of the WIPP's Compliance with the Disposal Regulations (1996): Certification Decision (1998).

Energy Policy Act of 1992, Public Law 102-486 and Administrative Procedures Act, U.S.C. 551-559, 701-706.

Atomic Energy Act of 1954, as amended, 42 USC 2011 et seq. (1970) and Reorganization Plan No. 3 of 1970

Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978 (an amendment to the Atomic Energy Act), 42 USC 7901 et seq (1978)

Safe Drinking Water Act of 1974: National Primary Interim Drinking Water Regulations (1976), MCL

The Defense Base Closure and Realignment Act of 1990, Section 2905 (a) (1) (E) (10 U.S.C. 2687 Note).

## Strategic Objective: Prevent, Reduce and Respond to Releases, Spills, Accidents or Emergencies

By 2005, over 282,000 facilities will be managed according to the practices that prevent releases to the environment, and EPA and its partners will have the capabilities to successfully respond to all known emergencies to reduce the risk to human health and the environment.

### *Key Programs*

(Dollars in Thousands)

	<b>FY 1999 Enacted</b>	<b>FY 2000 Request</b>
RCRA Permitting	\$15,388.6	\$16,773.0
RCRA State Grants	\$27,493.7	\$27,493.7
Waste Combustion	\$7,346.7	\$7,297.7
Accident Safety/Prevention	\$0.0	\$0.0
Risk Management Plans	\$7,258.3	\$11,804.6
Federal Preparedness	\$9,560.2	\$9,560.2
Community Right to Know (Title III)	\$4,683.5	\$5,099.4
Underground Storage Tanks (UST)	\$6,077.9	\$6,345.3
UST State Grants	\$10,544.7	\$11,944.7
Oil Spills Preparedness, Prevention and Response	\$11,988.0	\$12,437.5
Hazardous Waste Research	\$6,619.3	\$7,249.6
Project XL	\$112.6	\$114.3
Common Sense Initiative	\$130.0	\$95.5
Civil Enforcement	\$1,234.0	\$1,334.7
Compliance Assistance and Centers	\$274.8	\$342.7

## *Annual Performance Goals and Performance Measures*

### UST COMPLIANCE

In 2000      90% of USTs will be in compliance with the December 22, 1998, requirements, which improves upon the estimated 65 percent as of the December 22, 1998 deadline.

<b>Performance Measures:</b>	<b>FY 1999</b>	<b>FY 2000</b>
Percentage of USTs in compliance with the 1998 deadline requirement.		90 compliance

**Baseline:**      An estimated 65% of USTs were in compliance at the time of the December 22, 1998 deadline.

### SPCC COMPLIANCE

In 2000      400 additional facilities will be in compliance with the Spill Prevention, Control and Countermeasure (SPCC) provisions of the oil pollution prevention regulations (for a cumulative of 890 facilities since 1997).

In 1999      190 additional facilities will be in compliance with spill prevention, control and countermeasure (SPCC) provisions of the oil pollution regulations (for a cumulative total of 490 additional facilities since 1997).

<b>Performance Measures:</b>	<b>FY 1999</b>	<b>FY 2000</b>
Facilities in SPCC compliance.	190 facilities	400 facilities

**Baseline:**      More than 300 facilities were in compliance in 1998.

### RCRA PERMITTING STANDARDS AND COMPLIANCE

In 2000      146 more hazardous waste management facilities will have approved controls in place to prevent dangerous releases to air, soil, and groundwater, for a total of 65 percent of 3,380 facilities.

In 1999      122 hazardous waste management facilities (for a cumulative total of 61% of 3,380 RCRA facilities) will have permits or other approved controls in place.

<b>Performance Measures:</b>	<b>FY 1999</b>	<b>FY 2000</b>
RCRA hazardous waste management facilities with permits or other approved controls in place.	122 facilities	146 facilities

**Baseline:**      EPA identified hazardous waste management facilities as of 1997. The baseline will be finalized in 1999.

Research**SCIENTIFICALLY DEFENSIBLE DECISIONS FOR ACTIVE MANAGEMENT OF WASTES**

In 2000      Enhance scientifically defensible decisions for active management of wastes, including combustion, by providing targeted research and technical support.

**Performance Measures:****FY 1999****FY 2000**

Develop provisional toxicity values for 10 - 20 waste constituents that value do not have values describing their dose-response toxicological properties.

09/30/2000

Provide journal article on factors that control Hg speciation in incinerators

1 article

**Baseline:**      1)refns & expds sci. basis of HWIR by add tox vals & refng mltimed, mltipth exp & risk mdlng sftwre;2)inits srch into non-cmbst trtmnt & rcyc of prior wsts;3)imp undrstd of Hg form in combust procs in order to min Hg cntm of wsts. Bline: Dvlpmnt of "formal" bline info for EPA research is curr undrwy

**PROTOTYPE MODEL FOR ASSESSING CUMULATIVE EXPOSURE INTEGRATED RISK ASSESSMENT**

In 1999      Complete prototype model for assessing cumulative exposure-risk assessment integrating the environmental impact of multiple chemicals through multiple media and pathways.

**Performance Measures:****FY 1999****FY 2000**

HWIR Human and Ecosystems Site (Generic) Exposure-Risk Assessment Screening Model, peer reviewed and applied to HWIR listed chemical exit levels

30-SEP-1999

Beta version for comprehensive modeling system.

09/30/1999 system

**Baseline:**      Development of formal baseline information for EPA research is currently underway.



## VERIFICATION AND VALIDATION OF PERFORMANCE MEASURES

The Office of Underground Storage Tanks (OUST) uses the following processes to verify and validate the performance measures data. Designated state agencies submitted semi-annual progress reports to the EPA regional offices, who review, verify and then forward the data to the OUST Headquarters office. OUST Headquarters staff examine the data and resolve any discrepancies with the regional offices. The data are displayed on a region by region basis, which allows regional staff to verify that their data are the same as Headquarter's. However, OUST does not maintain a national database.

The performance results are also used in OUST's Regional Strategic Overview (RSO) Process to assess the status of State progress in implementing the program. This process is based on strategic discussions that Headquarters has with the Regions and the Regions have with the States, regarding how to continue to improve States' performance. In the mid-year and end of year state evaluations, the Regions discuss with States their efforts to update and validate their data, and to make continual improvements in their performance. EPA relies on its state partners to provide our measurement data which have been used by the UST/LUST program for 10 years.

The Chemical Emergency Preparedness and Prevention program uses the following processes and data bases to collect and validate performance data. Facilities will be required to submit information on the chemical risks in their facilities in 1999. This information will be placed in a database that will be accessible to Federal, state, and local officials, as well as the public with safeguards for sensitive information. The information will be verified through

Regional and state audits and reports. LEPCs will be contacted periodically to verify risk reduced in their community. The Emergency Release Notification System (ERNS) database will be used to confirm releases reported in RMPs.

States and LEPCs will be surveyed to determine the status of their chemical emergency preparedness and prevention programs, including the steps taken to integrate counter-terrorism planning. A Federal Emergency Management Agency (FEMA) database will be monitored to determine if all hazard plans include a counter-terrorism appendix. A database will track the status of RMP state delegated programs. Regions and headquarters will routinely enter information on the status of state RMP implementation plans, and Regions will ensure quality of the data through quarterly reviews of the states and random checks of LEPCs.

The CERCLIS database developed for the Superfund program is also used to help track and store the Oil Spill Program performance data. Entry of Oil Spill Program data into CERCLIS began in 1993. A complete description of the CERCLIS database is located under Goal 5, Objective 1.

Environmental monitoring data (such as measures of combustion facility emissions) will meet standard quality assurance/quality control (QA/QC) procedures for the RCRA program, as documented in the Office of Solid Waste Quality Assurance Management Plan and the Guidebook for QA/QC Procedures for Submission of Data for the Land Disposal Restrictions Program.

The majority of data for the RCRA information system (RCRIS) and the Biennial Reporting System (BRS), originates with and is received from the states. The system architectures provide states with the ability to use software other than the national software managed by EPA for their data management activities, provided that they supply the mandatory data to EPA in the required quality and format. The Agency consolidates data from the states which is then used to construct the national databases used for program oversight and public information.

The national RCRA software provides a range of functions to ensure data quality. Both systems employ on-line data validation checks (e.g., range limits, mandatory data entry for required elements before saving of a record) to assure data type integrity as well as batch edits (performed when data is extracted and consolidated) to enforce program rules requiring associated consistency across data components for which on-line edits are impractical or inappropriate. Beyond the system-enforced data quality controls, states and regions who implement the program perform data validation reviews to ensure that the data properly inventories the essential program activities and is programmatically correct. During periodic program reviews, EPA headquarters also confirms the timeliness and accuracy of key data elements which support national program status reporting. Training on use of the systems is provided on a regular basis, usually annually, depending on the nature of system changes and user needs.

Non-hazardous waste management is delegated to the states. Federal guidance is provided, but no actual federal program implementation exists. Individual states collect and verify data on waste management practices for Industrial D and municipal wastes in

accordance with local needs. The Agency receives aggregate data more indirectly than in the case of hazardous waste, through reports, studies, or statistical sampling rather than a national data system. To measure progress, the Agency must rely on the ability and willingness of state regulatory programs to share information in these areas. "Approved controls in place" means compliance with the requirements of federal regulations, Agency approved state permit program, or other system of prior approval and conditions. For 2000, continued emphasis will be placed on approving State programs that will lead to all MSW disposal facilities having approved controls in place.

Progress under RCRA Permitting is recorded in activity event codes in RCRIS which are reviewed at least annually during the Beginning of the Year Plan process. While some problems in the accuracy of RCRIS data have been found in the past, significant improvements in quality have been made over the past few years. The importance of RCRIS data has been recognized, and the quality of RCRIS data is improving. Charts illustrating the comparative progress between Regions, and between States are shared with the Regions and States.

The RCRA program is currently evaluating its future information management needs and systems through a joint initiative with the states called WIN/INFORMED. This project covers the activities and information currently supported by both the RCRIS and BRS data systems. Analysis under WIN/INFORMED includes the identification of the data elements needed to support the implementation and management of the RCRA program; development of common, agreed upon national definitions; identification of programmatic process improvements; and tracking burden reduction. The design and

construction of new systems will be based on the results of each area of analysis, and will be flexible to accommodate future needs. The WIN/INFORMED project is scheduled to be completed by the end of the calendar year 2002.

### Research

EPA has several strategies to validate and verify performance measures in the area of environmental science and technology research. Because the major output of research is technical information, primarily in the form of reports, software, protocols, etc., key to these strategies is the performance of both peer reviews and quality reviews to ensure that requirements are met.

Peer reviews provide assurance during the pre-planning, planning, and reporting of environmental science and research activities that the work meets peer expectations. Only those science activities that pass agency peer review are addressed. This applies to program-level, project-level, and research outputs. The quality of the peer review activity is monitored by EPA to ensure that peer reviews are performed consistently, according to Agency policy, and that any identified areas of concern are resolved through discussion or the implementation of corrective action.

The Agency's expanded focus on peer review helps ensure that the performance measures listed here are verified and validated by an external organization. This is accomplished through the use of the Science Advisory Board (SAB) and the Board of Scientific Counselors (BOSC). The BOSC, established under the Federal Advisory Committee Act, provides an added measure of assurance by examining the way the Agency uses peer review, as well as the management of its research and development laboratories.

In 1998, the Agency presented a new Agency-wide quality system in Agency Order 5360.1/chg 1. This system provided policy to ensure that all environmental programs performed by or for the Agency be supported by individual quality systems that comply fully with the American National Standard, *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (ANSI/ASQC E4-1994).

The order expanded the applicability of quality assurance and quality control to the design, construction, and operation by EPA organizations of environmental technology such as pollution control and abatement systems; treatment, storage, and disposal systems; and remediation systems. This rededication to quality provides the needed management and technical practices to assure that environmental data developed in research and used to support Agency decisions are of adequate quality and usability for their intended purpose.

A quality assurance system is implemented at all levels in the EPA research organization. The Agency-wide quality assurance system is a management system that provides the necessary elements to plan, implement, document, and assess the effectiveness of quality assurance and quality control activities applied to environmental programs conducted by or for EPA. This quality management system provides for identification of environmental programs for which QA/QC is needed, specification of the quality of the data required from environmental programs, and provision of sufficient resources to assure that an adequate level of QA/QC is performed.

Agency measurements are based on the application of standard EPA and ASTM methodology as well as performance-based

measurement systems. Non-standard methods are validated at the project level. Internal and external management system assessments report the efficacy of the management system for quality of the data and the final research results. The quality assurance annual report and work

plan submitted by each organizational unit provides an accountable mechanism for quality activities. Continuous improvement in the quality system is accomplished through discussion and review of assessment results.

## STATUTORY AUTHORITIES

Subtitle I of the Hazardous and Solid Waste Amendments of 1984 to the Solid Waste Disposal Act. The regulated substances are liquid petroleum products and substances defined as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended under the Resource Conservation and Recovery Act of 1976.

Clean Air Act

Title III (Emergency Planning and Community Right-to-Know Act) of CERCLA, as amended by Superfund Amendments and Reauthorization Act (SARA) of 1986.

Clean Water Act (CWA), Section 311.

Oil Pollution Act (OPA), 33 U.S.C. 2701-2761.

Solid Waste Disposal Act as amended by Hazardous and Solid Waste Amendments of 1984 to the Resource Conservation and Recovery Act of 1976

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986

Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act (Public Law 102-579 as amended by Public Law 104-201) 40 CFR 194: Criteria for the Certification and Recertification of the WIPP's Compliance with the Disposal Regulations (1996): Certification Decision (1998).

Nuclear Waste Policy Act of 1982 Public Law 97-425.

Energy Policy Act of 1992, Public Law 102-486 and Administrative Procedures Act, 5 U.S.C. 551-559, 701-706.

Atomic Energy Act of 1954 as amended, 42 U.S.C. 2011 et seq. (1970), and Reorganization Plan #3 of 1970.

Uranium Mill Tailings Radiation Control Act (UMTRCA) as amended.

Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1998.

Title XIV of the National Defense Authorization Act of 1996 (Nunn-Lugar II).Section 6981, Research, demonstration, training, and other activities, of RCRA specifically authorizes the Administrator to perform research on waste management and waste combustion issues. The Agency must evaluate and permit many combustion facilities in a relatively short time. EPA is also mandated under The Clean Air Act Amendments to develop MACT regulations and to evaluate and reduce the risks from combustion facilities.